



Federal Trade Commission

TAR, NICOTINE, AND CARBON MONOXIDE OF THE SMOKE OF 534 VARIETIES OF DOMESTIC CIGARETTES

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ERRATA

Report of the Tar, Nicotine, and Carbon Monoxide Content of 534 Varieties of Domestic Cigarettes

There is a typographical error on the bottom of page 15 and the top of page 16, in the nicotine value for 3 Marlboro King cigarettes. The correct nicotine values are as follows:

	TAR	NIC	CO
Marlboro King F SP LT	11	0.8	11
Marlboro King F SP LT 25	11	0.9	11
Marlboro King F MP LT	11	0.8	12

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Source: <https://www.industrydocuments.ucsf.edu/docs/mlkk0001>

Report on Tar, Nicotine, and Carbon Monoxide Content of the
Smoke of 534 Varieties of Domestic Cigarettes

This report contains data on the tar, nicotine, and carbon monoxide content of 534 varieties of cigarettes manufactured and sold in the United States. The test results were submitted to the Federal Trade Commission (FTC) by the six largest cigarette manufacturers in the United States. These companies are the following: The American Tobacco Company; Brown & Williamson Tobacco Corporation; Liggett Group, Inc.; Lorillard, Inc.; Philip Morris, Inc.; and R. J. Reynolds Tobacco Company, Inc.

The Tobacco Institute Testing Laboratory (TITL), a private laboratory operated by the cigarette industry, conducted most of the tar, nicotine and carbon monoxide tests for these 534 varieties.¹ The methodology, processes and procedures that the six cigarette companies and TITL employ are identical to those the Commission, in its own testing lab, had followed in the past.² The former director of the FTC laboratory, who is

¹Generic and private label cigarettes, as well as new or not widely available brands, were not tested by TITL. The test results were supplied to the Commission by the manufacturers, pursuant to compulsory process. Results of such non-TITL testing are indicated by single asterisks for new and not widely available brands, and double asterisks for generic and private label brands.

²The Commission determined in early 1987 to close its laboratory. The Commission found that closing the laboratory was
(continued...)

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currently a contractor to the Commission, was given unrestricted access to the TITL laboratory for the purpose of reviewing the testing methodology and protocols used by the TITL and for monitoring the actual testing process.

TITL provided the results of its tests to the respective cigarette companies. The companies then provided the data generated by TITL regarding their own brands to the FTC, in response to requests issued by the Commission requiring submission of this information.

The cigarettes were tested using the Cambridge Method. This methodology has been approved by the FTC and used as the standard for cigarette testing since 1966. The testing was subjected to the conditions prescribed by the FTC in Federal Register, Volume 32, Number 147, Page 11178, dated August 1, 1967. With regard to the testing of carbon monoxide content, the conditions are specified in Federal Register, Volume 45, Number 134, Page 46483, dated July 10, 1980. The conditions prescribed in the FTC's 1967 announcement are the following:

²(...continued)
necessary for several reasons. First, the operation of a highly complex testing program, even one limited to tar, nicotine, and carbon monoxide, was incompatible with the expertise of the agency. Secondly, the cost of the laboratory was significant, and the Commission would have had to commit significant additional funds in order to continue the program. Finally, the Commission was persuaded that the same information could be obtained from other sources, and other means were available to verify the accuracy of industry testing results.

1. Smoke cigarettes to a 23mm. butt length, or to the length of the filter and overwrap plus 3mm. if in excess of 23mm.;
2. Base results on a test of 100 cigarettes per brand, or type;
3. Cigarettes to be tested will be selected on a random basis, as opposed to "weight selection;"
4. Determine particulate matter on a "dry" basis employing the gas chromatography method published by C.H. Sloan and B.J. Sublett in Tobacco Science 9, page 70, 1965, as modified by F.J. Schultz' and A.W. Spears' report published in Tobacco Vol. 162, No. 24, page 32, dated June 17, 1966, to determine the moisture content;
5. Determine and report the tar content after subtracting moisture and alkaloids (as nicotine) from particulate matter;
6. Report tar content to the nearest whole milligram and nicotine content to the nearest 1/10 milligram, (32 Fed. Reg. 11178 (1967)).

The 1980 FTC announcement contained specifications regarding a new testing methodology to be used in determining the carbon

monoxide (CO) and nicotine content of cigarettes. These specifications are the following:

1. Determine CO concentration using a 20-port sequential smoking machine described by H.C. Pillsbury and G. Merfeld at the 32nd Tobacco Chemists Research Conference, October, 1978;
2. The concentration of CO will be reported as milligrams per cigarette;
3. The present method for tar and nicotine determination will be modified to use the method described in an article entitled, "Gas Chromatographic Determination of Nicotine Contained on Cambridge Filter Pads," by John R. Wagner et al., as presented at the annual meeting of the Association of Official Analytical Chemists, October 1978. (45 Fed. Reg. 46483 (1980)).

TITL reported, and the FTC's contractor confirmed, that the tested cigarette samples were obtained by an independent company under contract to TITL. Under its contract with TITL, this company was to purchase two packages of every variety of cigarettes manufactured and distributed in 50 geographical locations throughout the United States. If not all varieties were available in every location, one or more packages of

cigarettes were purchased in the areas where the respective varieties were available. This procedure of selecting cigarettes for testing replicates the one used by the FTC. Cigarettes utilized in the test represented 534 varieties of the cigarettes sold in the U.S. at the time of the purchase (1990).

The tar and carbon monoxide figures are rounded to the nearest milligram (mg.). Those figures with 0.5 mg. or greater are rounded up, while those with 0.4 mg. or less are rounded down. The nicotine figures are rounded to the nearest tenth of a milligram. Those with 0.05 mg. or greater are rounded up; those with 0.04 mg. or less are rounded down.

Cigarette brands with assay results of tar and carbon monoxide below 0.5 mg. per cigarette variety and of nicotine below 0.05 mg. are recorded in the table as <0.5, and <0.05 respectively. The table does not provide actual tar ratings for these cigarettes, because the currently approved testing methodology is not sufficiently sensitive to report these components at lower levels.

The following varieties are the ten lowest in tar content as tested by TITL:

1. Carlton	KFHP Ultra.....<0.5
2. Now	KFHP.....<0.5
3. Now 100	FHP.....<0.5
4. Carlton 100	FMHP.....1
5. Now	KFMSP.....1
6. Carlton	KFMSP.....1
7. Now	KFSP.....1
8. Carlton	KFHP.....1
9. Carlton 100	FHP.....1
10. Carlton	KFSP.....1

NOTE: K - King Size, F - Filter, M - Menthol, HP - Hardpack,
SP - Softpack.

In descending order, those ranking the fourteen highest in tar content are the following:³

1. Philip Morris Commander	KNFSP.....	26
2. Old Gold	KNFSP.....	26
3. Pall Mall	KNFSP.....	25
4. Players	RNFHP.....	25
5. Raleigh	KNFSP.....	25
6. Herbert Tareyton	KNFSP.....	24
7. Lucky Strike	RNFSP.....	24
8. Basic *	KNFSP.....	24
9. Best Buy*	KNFSP.....	24
10. Famous Value*	KNFSP.....	24
11. Genco*	KNFSP.....	24
12. GPA*	KNFSP.....	24
13. GPA Approved*	RNFSP.....	24
14. Gridlock*	KNFSP.....	24

Note: K - King Size, R - Regular Size, F - Filter, NF - Non-Filter, M - Menthol, HP - Hardpack, SP - Softpack.

³Asterisked entries are generic and private label brands, and were not tested by TITL. The information was supplied by the companies and was not verified by the FTC.

On April 13, 1983, the Commission announced it had determined that its testing methodology for tar, nicotine, and carbon monoxide at that time understated the measured deliveries for Brown & Williamson's Barclay cigarettes. Therefore, Barclay cigarettes would be delisted from the Commission's reports for tar, nicotine, and carbon monoxide until a new, accurate methodology could be tested and adopted. The Commission has found that there is a significant likelihood that the same problem exists with two other Brown & Williamson varieties -- Kool Ultra and Kool Ultra 100's.

Although there have been several adaptations offered for the testing methodology, none has proven to be satisfactory. At present, other methods for testing channel ventilated cigarettes are being considered by CORESTA.⁵ Commission staff is monitoring these proceedings.

On July 25, 1986, the Commission informed Brown & Williamson that as a result of a review of information presented by Brown & Williamson regarding a tar and nicotine rating for two varieties of Barclay cigarettes with a new filter, the Commission would authorize, under certain conditions, the following legends for advertising purposes:

⁵CORESTA is a multinational European organization studying the testing of cigarettes.

1. For Barclay King size:

3 mg. tar, .2 mg. nicotine

average per cigarette as authorized by FTC.

2. For Barclay 100's

5 mg. tar, .4 mg. nicotine

average per cigarette as authorized by FTC.

Brown & Williamson also agreed to provide the Commission with information regarding tar and nicotine ratings to be used in advertising for Kool Ultra and Kool Ultra 100's. Until this information is presented it has been agreed that the ratings for these two varieties will not be included in Commission reports.

The following pages present, in alphabetical order, the tar, nicotine, and carbon monoxide information collected from the cigarette companies for 534 varieties of cigarettes sold domestically in 1990.

BRAND NAME	DESCRIPTION						TAR	NIC	CO
ALPINE	KING	F	SP	MEN			16	1.1	15
ALPINE	100	F	SP	MEN			15	1.1	14
ALPINE	KING	F	SP	MEN	LT		09	0.7	10
ALPINE	100	F	SP	MEN	LT		09	0.8	11
ALPINE*	LONG	F	HP	MEN	FUL-FLA		15	1.0	14
ALPINE*	LONG	F	HP	MEN	LT		09	0.7	10
AMERICAN FILTER	100	F	SP				16	1.2	15
AMERICAN FILTER	KING	F	SP				16	1.2	14
AMERICAN LIGHTS	100	F	SP	LT			11	1.0	12
AMERICAN LIGHTS	KING	F	SP	LT			11	0.9	12
AMERICAN LIGHTS	100	F	SP	MEN	LT		11	1.0	12
B&H DE-NIC*	KING	F	HP	MEN	LIGHTS		09	0.1	NT
B&H DE-NIC*	100	F	HP	LIGHTS			09	0.1	NT
B&H DE-NIC*	100	F	HP	MEN	LIGHTS		09	0.1	NT
B&H DE-NIC*	KING	F	HP	LIGHTS			09	0.1	NT
BASIC**	KING	F	SP				16	1.1	NT
BASIC**	100	F	SP				17	1.2	NT
BASIC**	KING	F	SP	LIGHTS			10	0.8	NT
BASIC**	KING	F	SP	MEN	LIGHTS		11	0.8	NT
BASIC**	100	F	SP	LIGHTS			11	0.8	NT
BASIC**	100	F	SP	MEN	LIGHTS		11	0.8	NT
BASIC**	KING	F	SP	ULTRA LT			06	0.5	NT
BASIC**	100	F	SP	ULTRA LT			06	0.5	NT
BASIC**	KING	NF	SP				24	1.6	NT
BELAIR	KING	F	SP	MEN			10	0.8	10
BELAIR	100	F	SP	MEN			08	0.7	09

*New brands or brands not widely available in the marketplace :
data supplied by the company.

**Private label cigarettes : data supplied by the companies.

< (less than) below the sensitivity of the testing method.

DESCRIPTION: F-Filter; NF-non Filter; MEN-Menthol; HP-Hard Pack;
SP-Soft Pack; Reg-Regular (70mm); K-King Size (80-85); 100 &
120 are in millimeter per cigarette; Lt-Light; FLA-Flavor;
DLX-Deluxe; 10, 25, or 30-Number of cigarettes per pack if
other then 20.

TAR: Total particulate matter in milligrams per cigarette less
nicotine and water.

NIC: Total alkaloids reported as milligrams of nicotine per
cigarette.

CO: Carbon monoxide reported in milligrams per cigarette.

"NT" entered where CO was not available.

BRAND NAME	DESCRIPTION						TAR	NIC	CO
BELAIR	KING	F	SP	MEN	LO-PRICE		15	1.2	14
BELAIR	100	F	SP	MEN	LO-PRICE		14	1.2	14
BELAIR	KING	F	SP	MEN	LT	LO-PRICE	09	0.8	10
BELAIR	LONG	F	SP	MEN	LT	LO-PRICE	09	0.9	10
BENSON AND HEDGES	KING	F	HP				15	1.3	12
BENSON AND HEDGES	100	F	HP	LT			11	0.9	11
BENSON AND HEDGES	100	F	HP	MEN	LT		10	0.8	11
BENSON AND HEDGES	100	F	SP				16	1.2	15
BENSON AND HEDGES	100	F	HP				16	1.2	15
BENSON AND HEDGES	100	F	SP	MEN			16	1.2	15
BENSON AND HEDGES	100	F	SP	MEN			16	1.2	16
BENSON AND HEDGES	100	F	SP	LT			10	0.8	12
BENSON AND HEDGES	100	F	SP	MEN	LT		10	0.8	11
BENSON AND HEDGES	100	F	HP	DLX	ULTRA-LT		05	0.5	06
BENSON AND HEDGES	100	F	HP	MEN	DLX	ULTRA-LT	05	0.4	06
BENSON AND HEDGES	KING	F	SP	MULTI			11	0.9	10
BEST BUY**	KING	F	SP	FUL-FLA			16	1.1	NT
BEST BUY**	100	F	SP	FUL-FLA			17	1.2	NT
BEST BUY**	KING	F	SP	LT			10	0.8	NT
BEST BUY**	KING	F	SP	MEN	LT		11	0.8	NT
BEST BUY**	100	F	SP	LT			11	0.8	NT
BEST BUY**	100	F	SP	MEN	LT		11	0.8	NT
BEST BUY**	KING	F	SP	ULTRA-LT			06	0.5	NT
BEST BUY**	100	F	SP	ULTRA-LT			06	0.5	NT
BEST BUY**	KING	NF	SP				24	1.6	NT
BEST VALUE**	KING	F	SP	FULL FLAVOR			15	1.2	15
BEST VALUE**	100	F	SP	FULL FLAVOR			15	1.2	17
BEST VALUE**	KING	F	SP	LT			10	0.9	11
BEST VALUE**	100	F	SP	LT			09	0.8	09
BEST VALUE**	100	F	SP	ULTRA-LTSP			05	0.5	06
BEST VALUE**	KING	F	SP	MEN	LT		11	0.9	12
BEST VALUE**	100	F	SP	MEN	LT		11	1.0	10
BEST VALUE**	KING	F	SP	ULTRA LT			05	0.5	07
BIG MONEY**	100	F	SP	MEN	LIGHTS		11	0.8	NT
BRISTOL*	KING	F	SP	LT			11	0.8	12
BRISTOL*	KING	F	SP	MEN	LT		11	0.8	12
BRISTOL*	100	F	SP	LIGHT			11	0.8	13
BRISTOL*	100	F	SP	MEN	LT		11	0.9	12
BRISTOL*	KING	F	SP				16	1.1	NT
BRISTOL*	100	F	SP				16	1.1	NT
BRISTOL*	KING	NF	SP				22	1.4	NT
BRISTOL*	100	F	SP	ULTRA LT			06	0.5	NT
BUCKS*	KING	F	SP				14	1.0	NT
BUCKS*	KING	F	SP	LT			11	0.8	NT
BULL DURHAM*	KING	F	HP				14	1.1	16
BULL DURHAM*	KING	F	HP	LITES			10	0.9	09
CAMBRIDGE	100	F	SP	ULTRA			04	0.4	06
CAMBRIDGE	KING	F	SP	LT			12	0.9	12
CAMBRIDGE	KING	F	SP	MEN	LT		12	0.9	12
CAMBRIDGE	100	F	SP	LT			12	0.9	13

BRAND NAME	DESCRIPTION						TAR	NIC	CO
CAMBRIDGE	100	F	SP	MEN	LT		11	0.9	13
CAMBRIDGE	KING	F	SP	FULL-FLA			17	1.1	15
CAMBRIDGE	100	F	SP	FULL-FLA			17	1.2	16
CAMEL	KING	F	SP				14	1.0	13
CAMEL	KING	F	HP				16	1.0	15
CAMEL	100	F	SP	LT			10	0.8	12
CAMEL	KING	F	SP	LT			11	0.8	11
CAMEL	KING	F	HP	LT			09	0.6	11
CAMEL	70	NF	SP				22	1.4	13
CAMEL	100	F	SP				16	1.0	17
CAMEL*	85	F	SP	ULTRA LT			06	0.6	08
CAMEL*	85	F	HP	ULTRA LT			06	0.5	08
CAMEL*	100	F	HP	ULTRA LT			06	0.6	07
CAPRI	100	F	HP				09	0.8	06
CAPRI	100	F	HP	MEN			09	0.7	06
CAPRI	120	F	HP				13	1.1	09
CAPRI	120	F	HP	MEN			12	1.0	07
CARLTON	120	F	SP				05	0.5	05
CARLTON	KING	F	SP				01	0.1	02
CARLTON	120	F	SP	MEN			05	0.5	04
CARLTON	KING	F	SP	MEN			01	0.1	02
CARLTON	KING	F	HP				01	0.1	02
CARLTON	100	F	HP				01	0.1	01
CARLTON	100	F	SP				02	0.2	03
CARLTON	100	F	HP	MEN			01	0.1	01
CARLTON	100	F	SP	MEN			03	0.3	04
CARLTON	KING	F	HP	ULTRA			<0.5	<0.05	<0.5
CARTIER VENDOME	100	F	HP				08	0.8	08
CARTIER VENDOME	100	F	HP	10			08	0.7	07
CARTIER VENDOME	100	F	HP	MEN			08	0.8	08
CARTIER VENDOME	100	F	HP	MEN	10		08	0.8	08
CENTURY	KING	F	SP	25			15	1.0	17
CENTURY	KING	F	SP	LT	25		08	0.7	10
CENTURY	100	F	SP	25			15	1.1	18
CENTURY	100	F	SP	LT	25		11	0.9	12
CENTURY	100	F	SP	MEN	LT	25	11	0.8	13
CHELSEA	100	F	HP	MEN			10	0.7	10
CHELSEA	100	F	HP				10	0.8	10
CHESTERFIELD	REG	NF	SP				18	1.2	11
CHESTERFIELD	85	NF	SP				22	1.5	14
CHESTERFIELD	KING	F	SP	LIGHT			09	0.7	11
CHESTERFIELD	100	F	SP	LIGHT			09	0.8	10
CLASS A**	REG	NF	SP	NF			19	1.3	11
CLASS A**	KING	NF	SP				23	1.6	14
CLASS A**	KING	F	SP	FULL			16	1.3	13
CLASS A**	KING	F	SP	MEN	FULL		16	1.3	13
CLASS A**	100	F	SP	FULL			17	1.4	14
CLASS A**	100	F	SP	MEN	FULL		17	1.4	14
CLASS A**	KING	F	SP	LT			11	1.0	12
CLASS A**	KING	F	SP	MEN	LT		11	1.0	14
CLASS A**	100	F	SP	LT			12	1.1	11
CLASS A**	100	F	SP	MEN	LT		12	1.1	11
CLASS A**	KING	F	SP	ULTRA LT			06	0.7	06

BRAND NAME	DESCRIPTION					TAR	NIC	CO
CLASS A**	KING	F	SP	MEN	ULTRA LT	06	0.7	06
CLASS A**	100	F	SP	ULTRA	LT	06	0.7	05
CLASS A**	100	F	SP	MEN	ULTRA LT	06	0.7	05
CLASS A DELUXE**	KING	F	SP	DLX	FULL	16	1.3	13
CLASS A DELUXE**	100	F	SP	DLX	FULL	17	1.4	14
CLASS A DELUXE**	KING	F	HP	DLX	LT	14	1.2	13
CLASS A DELUXE**	KING	F	SP	DEL	LT	11	1.0	12
CLASS A DELUXE**	KING	F	SP	MEN	DEL LT	11	1.0	14
CLASS A DELUXE**	100	F	SP	DEL	LT	12	1.1	11
CLASS A DELUXE**	100	F	SP	MEN	DEL LT	12	1.1	11
CLASS A DELUXE**	100	F	SP	DLX	UL-LT	06	0.7	05
COST CUTTER**	KING	F	SP	FULL-FLA		15	1.2	15
COST CUTTER**	100	F	SP	FULL-FLA		15	1.2	17
COST CUTTER**	KING	F	SP	LT		10	0.9	11
COST CUTTER**	100	F	SP	LT		09	0.8	09
COST CUTTER**	100	F	SP	ULTRA-LT	SP	05	0.5	06
COST CUTTER**	KING	F	SP	MEN	LT	11	0.9	12
COST CUTTER**	100	F	SP	MEN	LT	11	1.0	10
DAKOTA*	85	F	HP	MEN	FULL	18	1.4	16
DAKOTA*	KING	F	HP	LIGHT		12	0.9	12
DORAL	KING	F	SP	LT		09	0.8	10
DORAL	KING	F	SP	MEN	LT	09	0.7	10
DORAL	100	F	SP	LT		10	0.9	10
DORAL	100	F	SP	MEN	LT	09	0.7	12
DORAL	KING	F	SP	FULL-FLA		15	1.1	15
DORAL	100	F	SP	FULL-FLA		15	1.1	17
DORAL	100	F	SP	ULTRA-LT		05	0.5	07
DORAL	KING	F	SP	MEN	FULL-FLA	15	1.1	15
DORAL	100	F	SP	MEN	FULL-FLA	15	1.1	17
DORAL	KING	F	SP	ULTRA-LT		05	0.5	06
ENGLISH OVAL	KING	NF	HP			23	1.9	15
EVE	120	F	HP	LT		12	1.0	10
EVE	120	F	HP	MEN	LT	11	1.0	10
EVE	100	F	HP	MEN	SLIM	12	1.0	09
EVE	100	F	HP	LT	SLIM	12	1.0	09
EVE	120	F	HP	ULTRA-LT		05	0.5	04
EVE	120	F	HP	MEN	ULTRA-LT	05	0.5	04
EVE*	100	F	HP	MEN	ULTRA LT	06	0.7	05
EVE*	100	F	HP	ULTRA LT		06	0.7	05
F&L**	KING	F	HP	LT		11	0.8	NT
F&L**	100	F	SP	ULTRA-LT		06	0.5	NT
F&L**	KING	F	SP	MEN	LT	11	0.8	NT
F&L**	KING	F	SP	LT		10	0.8	NT
F&L**	100	F	SP	LT		11	0.8	NT
F&L**	100	F	SP	MEN	LT	11	0.8	NT
FALCON*	KING	F	SP	LT		11	0.7	11
FALCON*	KING	F	SP	MEN	LT	10	0.8	12
FALCON*	100	F	SP	LT		11	0.8	14
FALCON*	100	F	SP	MEN	LT	09	0.7	11
FAIRY VALUE**	KING	F	SP	FUL-FLA		16	1.1	NT
FAIRY VALUE**	KING	F	SP	LT		10	0.8	NT
FAIRY VALUE**	KING	F	SP	MEN	LT	11	0.8	NT
FAIRY VALUE**	100	F	SP	FUL-FLA		17	1.2	NT

BRAND NAME	DESCRIPTION					TAR	NIC	CO
FAMOUS VALUE**	100	F	SP	LT		11	0.8	NT
FAMOUS VALUE**	100	F	SP	MEN	LT	11	0.8	NT
FAMOUS VALUE**	KING	F	SP	ULTRA-LT		06	0.5	NT
FAMOUS VALUE**	100	F	SP	ULTRA-LT		06	0.5	NT
FAMOUS VALUE**	KING	NF	SP			24	1.6	NT
✓GENCO**	KING	NF	SP			24	1.6	NT
GENCO**	KING	F	SP			16	1.1	NT
GENCO**	100	F	SP			11	0.8	NT
GENCO**	KING	F	SP	LT		10	0.8	NT
GENCO**	KING	F	SP	MEN	LT	11	0.8	NT
GENCO**	100	F	SP	LT		17	1.2	NT
GENCO**	100	F	SP	MEN	LT	11	0.8	NT
GENCO**	KING	F	SP	ULTRA	LT	06	0.5	NT
GENCO**	100	F	SP	ULTRA	LT	06	0.5	NT
GOLDEN LIGHTS	KING	F	SP	LT		07	0.7	08
GOLDEN LIGHTS	KING	F	SP	MEN	LT	08	0.7	08
GOLDEN LIGHTS	100	F	SP	LT		08	0.8	08
GOLDEN LIGHTS	100	F	SP	MEN	LT	09	0.8	10
GOLDEN LIGHTS	KING	F	HP	LT		07	0.6	08
GOLDEN LIGHTS	100	F	HP	LT		08	0.7	08
✓GPA**	KING	NF	SP			24	1.6	NT
GPA**	KING	F	SP			16	1.1	NT
GPA**	100	F	SP			17	1.2	NT
GPA**	KING	F	SP	LT		10	0.8	NT
GPA**	KING	F	SP	MEN	LT	11	0.8	NT
GPA**	100	F	SP	LT		11	0.8	NT
GPA**	100	F	SP	MEN	LT	11	0.8	NT
GPA**	KING	F	SP	ULTRA	LT	06	0.5	NT
GPA**	100	F	SP	ULTRA	LT	06	0.5	NT
GPC APPROVED**	REG.	NF	SP	PLAIN		24	1.3	14
GPC APPROVED**	KING	F	SP	LT		11	0.7	12
GPC APPROVED**	100	F	SP	LT		12	0.8	13
GPC APPROVED**	KING	F	SP	MEN	LT	10	0.7	10
GPC APPROVED**	100	F	SP	MEN	LT	09	0.7	09
GPC APPROVED**	KING	F	SP	ULTRA-LT		06	0.5	07
GPC APPROVED**	100	F	SP	ULTRA-LT		06	0.5	07
GPC APPROVED**	KING	F	SP			18	1.0	16
GPC APPROVED**	100	F	SP			16	1.0	17
GPC APPROVED**	KING	F	SP	MEN		16	1.0	14
GPC APPROVED**	100	F	SP	MEN		14	1.0	15
✓GRIDLOCK**	KING	NF	SP			24	1.6	NT
GRIDLOCK**	KING	F	SP	FUL-FLA		16	1.1	NT
GRIDLOCK**	100	F	SP	LT		11	0.8	NT
GRIDLOCK**	100	F	SP	ULTRA-LT		06	0.5	NT
GRIDLOCK**	100	F	SP	FUL-FLA		17	1.2	NT
HARLEY DAVIDSON	KING	F	SP			10	0.8	11
HARLEY DAVIDSON	KING	F	SP	LT		08	0.7	10
HERBERT TAREYTON	KING	NF	SP			24	1.6	17
HERITAGE	85	F	SP	LIGHTS		10	0.8	13
HERITAGE	100	F	SP	LIGHTS		11	0.9	14
HI-LITE*	100	F	HP			14	1.0	13
HORIZON*	100	F	SP	LIGHT		12	0.8	13
HORIZON*	100	F	SP	MEN	LIGHT	12	0.8	12

BRAND NAME	DESCRIPTION				TAR	NIC	CO
KENT	KING	F	SP		12	0.9	13
KENT	100	F	SP		13	1.0	13
KENT	KING	F	HP		11	0.8	12
KENT	100	F	SP MEN		12	0.9	13
KENT	KING	F	SP III		03	0.3	04
KENT	100	F	SP PLAIN	III	05	0.5	07
KENT	100	F	HP III		05	0.5	07
KOOL	100	F	SP MEN	SUPER-LG	16	1.3	16
KOOL	REG	NF	SP MEN		21	1.3	14
KOOL	KING	F	SP MEN		16	1.2	16
KOOL	KING	F	HP MEN		16	1.1	15
KOOL	KING	F	SP MEN	LT	08	0.7	08
KOOL	100	F	SP MEN	LT	08	0.7	09
KOOL	KING	F	SP MEN	MILD	12	0.9	12
KOOL	100	F	SP MEN	MILD	12	1.0	12
KOOL	KING	F	HP MEN	MILD	12	0.9	11
KOOL DELUXE*	KING	F	HP MEN		09	0.8	10
KOOL DELUXE*	100	F	HP MEN		10	0.8	09
L AND M	KING	F	SP		14	1.0	13
L AND M	KING	F	HP		14	1.1	13
L AND M	100	F	SP LIGHT	30	12	1.0	10
L AND M	100	F	SP LT	LONG	08	0.8	06
L AND M*	100	F	SP FUL		17	1.4	13
L AND M*	100	F	SP ULT-LT	10PK-30	06	0.7	05
LARK	KING	F	SP LT		12	0.9	10
LARK	100	F	SP LT		12	1.1	12
LARK	KING	F	SP		13	1.0	12
LARK	100	F	SP EXTRA	LONG	13	1.1	13
LUCKY STRIKE	REG	NF	SP		24	1.6	16
LUCKY STRIKE	KING	F	SP		13	1.0	13
LUCKY STRIKE	KING	F	HP		13	1.0	13
LUCKY STRIKE	100	F	SP		13	1.1	13
LUCKY STRIKE	KING	F	SP LT		08	0.7	09
LUCKY STRIKE	100	F	SP LT		09	0.8	10
LUCKY STRIKE*	100	F	SP MEN		12	1.0	12
MAGNA	KING	F	SP		13	0.9	14
MAGNA	KING	F	HP		14	0.9	14
MAGNA	KING	F	SP LT		11	0.7	12
MAGNA	KING	F	HP LT		09	0.6	11
MALIBU	100	F	SP		15	1.2	15
MALIBU	100	F	LT SP		09	0.8	10
MALIBU	100	MEN	SP F		11	1.0	12
MALIBU	KING	F	SP		16	1.2	14
MALIBU	KING	F	LT SP		08	0.7	09
MALIBU	KING	F	MEN SP		16	1.2	14
MALIBU	100	F	SP ULTRA-LT		05	0.5	07
MARLBORO	KING	F	HP		16	1.1	14
MARLBORO	KING	F	SP		16	1.1	14
MARLBORO	KING	F	SP 25		16	1.1	14
MARLBORO	KING	F	SP MEN		16	1.2	15
MARLBORO	100	F	SP		16	1.2	15
MARLBORO	100	F	HP		16	1.2	15
MARLBORO	KING	F	SP LT		11	0.8	11

BRAND NAME	DESCRIPTION					TAR	NIC	CO
MARLBORO	KING	F	SP	LT	25	11	9.0	0.9
MARLBORO	KING	F	HP	LT		11	8.0	0.8
MARLBORO	100	F	SP	LT		10	0.8	11
MARLBORO	100	(HP)	F	LT		10	0.8	11
✓ MARLBORO	100	F	HP	MEN	LIGHTS	09	0.8	10
MARLBORO	85	F	HP	MEN	LTS	09	0.8	09
MARLBORO	85	F	HP	ULTRA	LT	05	0.5	07
MARLBORO	100	F	HP	ULTRA	LT	06	0.5	08
MARLBORO*	85	F	HP	MEN		15	0.9	NT
MAX	120	F	SP			15	1.2	16
MAX	120	F	SP	MEN		15	1.2	16
MERIT	KING	F	SP			07	0.6	09
MERIT	KING	F	SP	MEN		08	0.6	09
MERIT	100	F	SP			09	0.7	11
MERIT	100	MEN	F	SP		09	0.8	11
MERIT	KING	HP	F			07	0.6	09
MERIT	KING	F	SP	ULTRA-LT		04	0.4	05
MERIT	100	F	SP	ULTRA-LT		05	0.5	07
MERIT	KING	F	SP	MEN	ULTRA-LT	05	0.5	06
MERIT	100	F	SP	MEN	ULTRA-LT	05	0.5	06
MERIT*	KING	F	HP	MEN		09	0.7	NT
MERIT	KING	F	HP	ULTRA-LT		04	0.5	06
MERIT	100	F	HP	ULTRA-LT		06	0.6	07
MERIT*	LONG	F	HP			09	0.7	NT
MERIT DE-NIC	KING	F	SP			08	0.1	09
MERIT DE-NIC	KING	F	SP	MEN		08	0.1	08
MERIT DE-NIC	KING	F	SP	ULTRA		03	0.1 ⁴⁸	04
MERIT DE-NIC	KING	F	SP	MEN	ULTRA	03	0.1 ⁴⁸	03
MIAMI*	KING	F	SP	LT		14	1.2	13
MISTY SLIMS	100	LT	F	HP		08	0.7	08
MISTY SLIMS	100	LT	F	MEN	HP	08	0.7	08
MONEY*	KING	F	SP	MEN	LIGHTS	11	0.8	NT
MONTCLAIR*	100	F	SP			15	1.2	16
MONTCLAIR	100	LT	F	SP		11	1.0	13
MONTCLAIR	100	LT	F	MEN	SP	11	1.0	12
MONTCLAIR*	KING	LT	F	SP		12	1.0	13
MONTCLAIR*	KING	LT	F	MEN	SP	12	1.0	13
MONTCLAIR*	KING	F	SP			16	1.3	15
MONTCLAIR*	100	F	SP	ULTR	LT	06	0.6	08
MORE	120	F	SP			16	1.2	21
MORE	100	F	HP	LT		09	0.7	09
MORE	120	F	SP	MEN		16	1.3	20
MORE	100	F	HP	MEN	LT	08	0.7	09
MORE	120	F	SP	MEN	LT	12	1.0	18
MORE	120	F	SP	LT		12	0.9	17
MORE	120	F	SP	WHT	LT	10	0.8	13
MORE	120	F	SP	MEN	WHT LT	10	0.8	14
NEWPORT	KING	MEN	F	SP		16	1.2	17
NEWPORT	KING	MEN	F	SP	25	16	1.2	17
NEWPORT	100	MEN	F	SP		18	1.4	19
NEWPORT	100	MEN	F	SP	25	18	1.4	18
NEWPORT	KING	F	HP	MEN		15	1.1	15
NEWPORT	KING	F	SP	MEN	LT	08	0.7	09

BRAND NAME	DESCRIPTION						TAR	NIC	CO
NEWPORT	100	F	SP	MEN	LT		08	0.8	08
NEWPORT	KING	F	HP	MEN	LT		08	0.7	09
NEWPORT	100	F	HP	MEN			18	1.4	19
NEWPORT	100	F	HP	MEN	LT		08	0.7	08
NEWPORT STRIPE*	100	F	HP	MEN	SLIM	LT	11	0.9	14
NEWPORT STRIPE	100	F	HP				11	0.9	15
NEWPORT STRIPE	100	F	MEN	HP			11	0.9	14
NEXT	KING	F	SP	MEN	LO-TAR		07	0.1	08
NEXT	100	F	SP	LO-TAR			09	0.1	09
NEXT	100	F	SP	MEN	LO-TAR		10	0.1	09
NEXT	KING	F	SP	ULTRA	LO-TAR		03	0.1	04
NEXT	KING	F	SP	MEN	ULTRA	LO-TAR	03	0.1	03
NEXT	100	F	SP	ULTRA	LO-TAR		05	0.1 ^{<0.05}	06
NEXT	100	F	SP	MEN	ULTRA	LO-TAR	04	0.1 ^{<0.05}	05
NEXT	KING	F	SP	LO-TAR			08	0.1	09
NO FRILLS**	KING	F	SP	LT			10	0.8	NT
NO FRILLS**	KING	F	SP	MEN	LT		11	0.8	NT
NO FRILLS**	100	F	SP	LT			11	0.8	NT
NO FRILLS**	100	F	SP	ULTRA-LT			06	0.5	NT
NO FRILLS**	100	F	SP	FULL			17	1.2	NT
NO FRILLS**	100	F	SP	MEN	LT		11	0.8	NT
NO FRILLS**	KING	F	SP	ULTRA	LT		06	0.5	NT
NO FRILLS**	KING	F	SP				16	1.1	NT
NOW	100	F	SP				02	0.2	03
NOW	KING	F	SP				01	0.1	02
NOW	KING	F	HP				<0.5	<0.05	<0.5
NOW	100	F	HP				<0.5	<0.05	<0.5
NOW	100	F	SP	MEN			02	0.2	03
NOW	KING	F	SP	MEN			01	0.1	02
OLD GOLD	KING	F	SP				16	1.2	17
OLD GOLD	100	F	SP				18	1.4	18
OLD GOLD	KING	NF	SP	STRAIGHT			26	1.8	17
OLD GOLD	KING	F	SP	LT			08	0.7	09
OLD GOLD	100	F	SP	LT			11	0.9	15
PALL MALL	KING	NF	SP				25	1.7	16
PALL MALL*	KING	NF	SP	25			25	1.7	16
PALL MALL	100	F	SP	LT			09	0.8	11
PALL MALL	100	F	SP				15	1.2	15
PALL MALL*	KING	NF	SP	LT			18	1.3	17
PALL MALL	KING	F	SP	RED			15	1.2	14
PALL MALL	100	F	SP	RED			15	1.2	14
PALL MALL	KING	F	SP	LT	RED		10	0.8	10
PALL MALL	100	F	SP	LT	RED		10	0.8	10
PALL MALL GOLD*	100	F	LT	SP			15	1.2	15
PARLIAMENT	KING	F	HP	MEN			09	0.7	09
✓ PARLIAMENT	LT	F	SP	KING			09	0.7	10
✓ PARLIAMENT	LT	100	F	SP			12	1.0	12
PHILIP MORRIS	KING	NF	SP	CON			26	1.7	16
PHILIP MORRIS*	REG	NF	SP				22	1.4	12
PHILIP MORRIS	100	F	HP	INTL			17	1.3	17
PHILIP MORRIS	100	F	HP	MEN	INTL		17	1.3	16
PICAYUNE*	REG	NF	SP				18	1.2	12
PLAYERS	REG	NF	HP				25	1.8	14

BRAND NAME	DESCRIPTION				TAR	NIC	CO
PLAYERS	KING	F	HP		11	0.9	12
PLAYERS	KING	F	MEN HP		11	0.9	12
PLAYERS	100	F	HP		13	1.1	12
PLAYERS	100	F	MEN HP		14	1.1	12
PLAYERS	KING	F	SP LT	25	10	0.8	11
PLAYERS	KING	F	SP MEN	LT	25	10	0.8
PLAYERS	100	F	SP LT	25	11	0.9	12
PLAYERS	100	F	SP MEN	LT	25	11	0.9
PYRAMID	KING	LT	F SP		10	0.8	12
PYRAMID	100	F	SP LT		10	0.9	11
PYRAMID	100	F	SP MEN	LT	10	0.8	11
PYRAMID	KING	NF	SP		21	1.4	14
PYRAMID	100	F	SP	ULTRA-LT	05	0.5	05
PYRAMID	KING	F	SP	FUL-FLA	14	1.1	13
PYRAMID	KING	MEN	F SP	FUL-FLA	14	1.1	13
PYRAMID	100	F	SP	FUL-FLA	15	1.2	15
PYRAMID	100	F	MEN SP	FUL-FLA	14	1.2	14
RALEIGH	KING	F	SP		14	0.9	14
RALEIGH	100	F	SP		15	1.0	16
RALEIGH	KING	F	SP	LT	11	0.9	12
RALEIGH	100	F	SP	LT	12	0.9	14
RALEIGH	REG	NF	SP		24	1.5	16
RALEIGH EXTRA*	KING	F	SP		18	1.1	17
RALEIGH EXTRA*	100	F	SP		16	1.0	18
RALEIGH EXTRA*	KING	F	SP	LIGHTS	11	0.7	12
RALEIGH EXTRA*	100	F	SP	LIGHTS	12	0.8	13
RALEIGH EXTRA*	KING	F	SP	MEN	10	0.8	10
RALEIGH EXTRA*	100	F	SP	MEN	09	0.8	09
RICHLAND	KING	F	SP		17	1.2	15
RICHLAND	KING	F	SP	25	17	1.2	14
RICHLAND	KING	F	SP	MEN	16	1.1	15
RICHLAND	KING	F	SP	MEN	25	16	1.1
RICHLAND	KING	F	SP	LT	25	11	0.9
RICHLAND	KING	F	SP	LIGHT		11	0.9
RICHLAND	100	F	SP		17	1.3	16
RICHLAND	100	F	SP	25	17	1.3	16
RICHLAND	100	F	SP	LT	12	0.9	14
RICHLAND	100	F	SP	LT	25	13	1.0
RICHLAND	100	F	SP	MEN	16	1.2	16
RITZ	100	F	HP	MEN	11	0.8	11
RITZ	100	F	HP		09	0.8	10
ROYALE*	KING	F	SP	LT	10	0.8	NT
ROYALE*	KING	F	SP	MEN	11	0.8	NT
ROYALE*	100	F	SP	LT	11	0.8	NT
ROYALE*	100	F	SP	MEN	11	0.8	NT
SALEM	KING	F	SP	MEN	17	1.2	17
SALEM*	85	F	HP	MEN	18	1.1	16
SALEM	100	F	SP	MEN	08	0.7	09
SALEM	KING	F	SP	MEN	09	0.7	11
SALEM	100	F	SP	MEN	16	1.2	15
SALEM	100	F	HP	MEN	08	0.7	09
SALEM	KING	F	SP	MEN	05	0.4	07
SALEM	100	F	SP	MEN	04	0.4	07

BRAND NAME	DESCRIPTION						TAR	NIC	CO	
SALEM	100	F	HP	MEN		LT	CUS-CASE	11	0.9	11
SALEM*	85	F	SP	MEN				17	1.2	NT
SARATOGA	120	F	HP					15	1.2	14
SARATOGA	120	MEN	F	HP				14	1.1	13
SATIN	100	F	SP					11	0.9	12
SATIN	100	F	SP	MEN				11	0.9	12
SAVVY*	100	F	SP	LT				10	0.9	11
SAVVY*	100	F	SP	MEN	LT			10	0.9	11
SAVVY*	100	F	SP	ULTRA-LT				05	0.5	05
SCOTCH BUY**	KING	F	SP	FULL				15	1.2	15
SCOTCH BUY**	100	F	SP	FULL				15	1.2	17
SCOTCH BUY**	KING	F	SP	LT				10	0.9	11
SCOTCH BUY**	100	F	SP	LT 100				09	0.8	09
SCOTCH BUY**	KING	F	S	MEN	LT MEN			11	0.9	12
SCOTCH BUY**	100	F	SP	MEN	LT MEN			11	1.0	10
SCOTCH BUY**	100	F	SP	ULTRA LT				05	0.5	06
SCOTCH BUY**	KING	F	SP	ULTRA LT				05	0.5	07
SILVA THINS*	100	F	SP					12	1.0	10
SILVA THINS*	100	F	SP	MEN				12	1.1	10
SILVA THINS	100	F	HP					11	0.9	11
SILVA THINS	100	F	HP	MEN				12	1.0	11
SPRING	100	F	SP	MEN				18	1.4	18
SPRING	KING	F	SP	LEMON	LT			09	0.8	12
SPRING	KING	F	SP	MEN	LEMON	LT		08	0.7	10
SPRING	100	F	SP	MEN	LIGHT	LEMON		10	0.8	13
STERLING**	100	F	SP	FULL-FLA				16	1.1	17
STERLING**	100	F	SP	MEN	FULL-FLA			17	1.2	16
STERLING**	100	F	SP	LT				10	0.8	11
STERLING**	100	F	SP	MEN	LT			09	0.8	09
TALL	120	F	SP					18	1.6	18
TALL	120	F	SP	MEN				17	1.5	16
TAREYTON	KING	F	SP					14	1.0	15
TAREYTON	100	F	SP					14	1.0	17
TAREYTON	KING	F	SP	LT				05	0.5	06
TAREYTON	LONG	LT	100	F	SP			07	0.7	08
TRIUMPH	KING	F	SP					03	0.3	04
TRIUMPH	KING	F	SP	MEN				03	0.3	04
TRIUMPH	100	F	SP					05	0.5	07
TRIUMPH	100	F	SP	MEN				04	0.4	06
TRUE	KING	F	SP					04	0.4	05
TRUE	KING	F	SP	MEN				04	0.4	05
TRUE	100	F	SP					06	0.6	07
TRUE	100	F	SP	MEN				07	0.6	07
UPTOWN*	KING	F	HP	MEN				18	1.3	NT
UPTOWN*	KING	F	SP	MEN				18	1.3	NT
VALUE & QUALITY**	100	F	SP	FULL-FLA				15	1.2	17
VALUE & QUALITY**	85	F	SP	FULL				15	1.2	15
VALUE & QUALITY**	85	F	SP	LIGHT				10	0.9	11
VALUE & QUALITY**	100	F	SP	LIGHT				09	0.8	09
VALUE & QUALITY**	85	F	SP	MEN	LIGHT			11	0.9	12
VALUE & QUALITY**	100	F	SP	MEN	LIGHT			11	1.0	10
VALUE & QUALITY**	100	F	SP	ULTRA-LT				05	0.5	06
VALUE & QUALITY**	85	F	SP	ULTRA LT				05	0.5	07

BRAND NAME	DESCRIPTION				TAR	NIC	CO
VANTAGE	100	F	SP		08	0.7	11
VANTAGE	KING	F	SP		08	0.6	10
VANTAGE	100	F	SP	ULTRA-LT	05	0.4	08
VANTAGE	KING	F	SP	ULTRA-LT	05	0.4	07
VANTAGE	KING	F	SP	MEN	09	0.7	12
VANTAGE	100	F	SP	MEN	08	0.6	11
VANTAGE*	100	F	SP	EXCEL	09	0.7	09
VICEROY	KING	F	SP		17	1.3	15
VICEROY	100	F	SP		18	1.4	15
VICEROY	KING	F	SP	LT	11	0.9	12
VICEROY	100	F	SP	LT	13	1.0	14
VICEROY	KING	F	HP		16	1.2	13
VICEROY*	100	F	HP		16	1.2	13
VICEROY*	KING	F	HP	LIGHTS	11	0.9	11
VICEROY*	100	F	HP	KIGHTS	12	0.9	13
VIRGINIA SLIMS	100	F	SP	SLIM	14	1.1	13
VIRGINIA SLIMS	100	F	SP	MEN SLIM	14	1.1	12
VIRGINIA SLIMS	100	F	HP	SLIM-LT	08	0.7	08
VIRGINIA SLIMS	100	F	HP	MEN SLIM-LT	08	0.6	08
VIRGINIA SLIMS	120	F	HP	SLIM-LT	13	1.1	13
VIRGINIA SLIMS	120	F	HP	MEN SLIM-LT	13	1.1	13
VIRGINIA SLIMS	100	F	HP	ULTRA-LT	05	0.5	06
VIRGINIA SLIMS	100	F	HP	MEN ULTRA-LT	05	0.4	05
VIRGINIA SLIMS	100	F	HP	SUPER SLIM	06	0.5	07
VIRGINIA SLIMS	100	F	HP	MEN SUPER SLIM	05	0.5	06
WINSTON	100	F	SP		16	1.1	18
WINSTON	KING	F	SP		16	1.1	15
WINSTON	KING	F	HP		15	1.0	15
WINSTON	100	F	SP	LT	10	0.8	12
WINSTON	KING	F	SP	LT	10	0.7	11
WINSTON	KING	F	HP	LT	09	0.6	11
WINSTON	100	F	SP	ULTRA-LT	05	0.4	07
WINSTON	KING	F	SP	ULTRA-LT	05	0.5	08
WINSTON	100	F	HP	LT	10	0.7	12